

Abstract

The invention provides a method for manufacturing quartz glass large scale slab ingot in a flame hydrolysis reaction in a furnace, including the steps of rotating the furnace, depositing a fused silica on a furnace bed, and extending the deposit outwardly by heating and rotation of the furnace, thereby a quartz glass slab ingot is obtained. A quartz glass burner is installed at the ceiling of the furnace, hydrogen gas supplied to the burner is flowing down along the tapered wall of the oxygen chamber and being ejected into the outer casing part of the hydrogen gas is deflected to the center of the burner, and mixed with the oxygen just after the ejection from the oxygen gas nozzles thereby the flame is formed smoothly and the thermal efficiency is improved,

The flame becomes wide enough and the silica powder transported by the hydrogen gas is uniformly fused by the flame and heat capacity of the fused silica.